

Eco friendly premises cleanser machine

K V Manjunath¹, Shiva yogi², Bhumika S³, Gunavardhan M N⁴, Bhoomika M⁵
^{1,2,3,4,5}Dept. of Industrial Engineering & Management, Siddaganga Institute of Technology,
Tumakuru.Karnataka-572103

Abstract— Clean campuses will have a positive impression on our community and neighborhood. Whether it is an ordinary day or other special occasions, the roads are battered by foot and vehicle traffic. Keeping the streets clean can prevent that from happening, offers many other benefits to the community, and offers safe transportation. The premises cleaner is most widely used, and these premises cleaners are a major asset to the society, which is used in railway stations, bus stands, colleges, airports etc. The premises cleaner uses human energy for its working operation, which is eco-friendly and user-friendly. In addition, we have used materials with readily available materials at a low cost, which offers a safe environment for walk and vehicles to travel on. In recent years, road cleaners are getting more popular for cleaning large floor areas in minimum time. However, India a developing country requires such machines to satisfy its cleaning needs.

Index Terms: Transportation, Eco friendly, Operation, Environment.

1.INTRODUCTION

Road cleansing machines are utilized in non-public and commercial regions alongside hospitals, bus stands, branch stores, lawns, flooring, and so forth. Lot of the one's devices requires immoderate portions of energy or gasoline-suchlike petrol diesel for his or her operation. As a result, they produce enough pollutants to infect the terrain.

Awareness is to increase a tool that needs to be operated manually to be volition to the conventional electric - powered street drawing tool. We've fulfilled modeling and assessment of the premises cleaner. Nonetheless, plenitude of sweats can be implemented to smooth the street for its conservation. Additionally, a few are reckless. They throw wrappers, plastic bottles, and waste at the roads. When the street addition is to be carried out, a few workers, especially women, are allotted to comb the street. They clean the street conventionally, like vacuuming. While brushing, there may be a higher

risk of spreading airborne situations like cough, asthma, problem within side the respiratory, etc. We can focus on a decrease, briskly, clean tool that may be beneficial for the ones. Additionally, this device will assist within side the vicinity of roads like on floors, and meadows without growing any shape of pollutants currently. India is usually presto growing country. The essential earnings of creating affiliation of India are Indian Road Transport. There's nevertheless a whole lot of sweats are enforced to smooth the street for its conservation, and additionally in India, severance is greater and therefore there may be a want to decrease labor familiar drawing machine. Hence, our give up is to design, improvement and evolution of operated by hand premises cleaner.

2. LITERATURE REVIEW

The information included in this analysis is primarily based on studies and literature related to the fabrication of floor cleaning machines. In particular, the theories being referred to are fabrication of leaf collectors, manually operated and the basic need for cleaning large floor areas. The authors have defined that with a simple algorithm and program, the cleaner will be able to cover large floor areas as well as find its way into and out of small corners, and these take less time when compared to conventional road cleaners. The mechanism used to drive the cleaning mechanism is like the one used in spinning mops known as magic mops, and these compact cleaners are used efficiently in bus stands, hospitals and in many other commercial places. And using manually operated premises cleaner we can save energy and from the finite element analysis, we observe that the stress level in the manually operated floor cleaning is in safe limits.

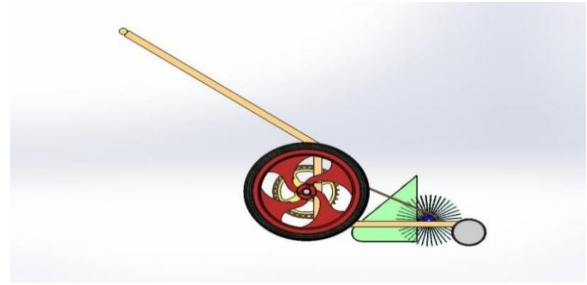
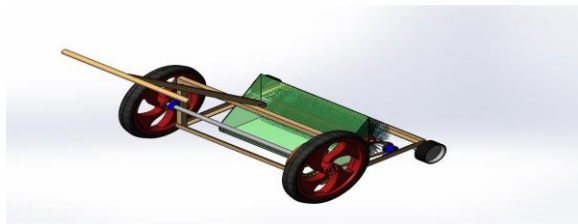
3.PROBLEM IDENTIFICATION

In the past, the machines that were made had a lot of weight. But this premises cleaner is a portable machine and can take up little space compared to existing equipment. And these are made using materials that are readily available at low cost. And an existing machine needs skilled work when this premises cleaner does not require skilled workers. Also, the manually operated premises cleaner can work very well in terms of coverage. It is easy to use and also environmentally friendly and this cleaner is physically compact compared to regular street cleaners and this premises cleaner can be used. In areas where ordinary street cleaners cannot reach. And these street cleaners can be used in congested areas where street cleaners are failing to cover. So, this premises cleaner works much better compared to existing street and road cleaners.

4. WORKING PRINCIPLE&CONCEPTUAL MODEL

Eco friendly premises cleanser machine is an advanced type of machine used for the roads or streets. The detail working of the Eco-friendly premises cleanser machine is explained, Eco friendly premises cleanser machine we are making without using any power supply, fuels and engines, the model is operated by a manpower.

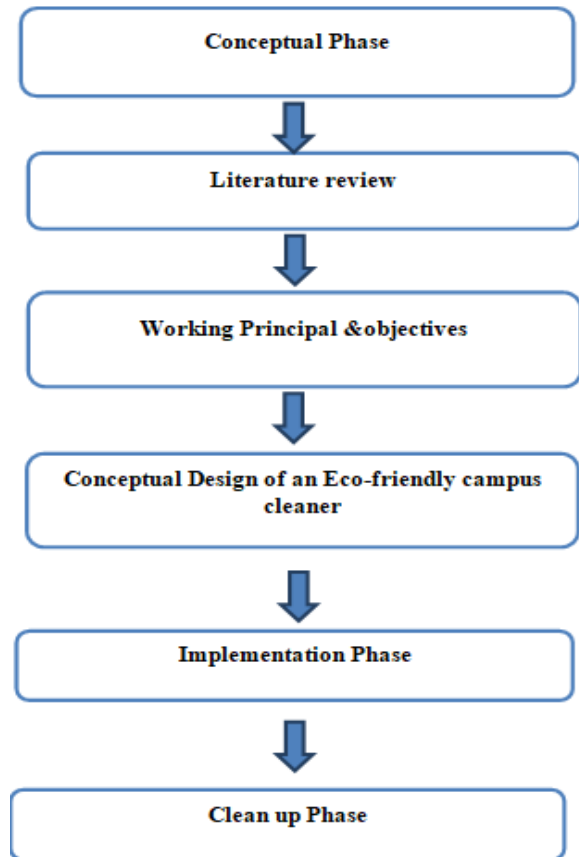
The model is fixed with pair of wheels which are connected with the help of shaft. It makes the wheels connected to one and another. The wheels are moved for a desired position with a help of manual force which can be operated by the handle, The handle can be adjusted for a required height and provided three adjusting gap holes for it. A chain drive is associated with the haggles at the two sides. The chain is moved by the hagggle. The chain is moved according to the wheel and gear. The brush moving in same direction as the wheels move and the brush brooms the waste present on the road, also it dumps the waste into the waste collecting box. The waste collecting box is removed to dump the waste into desired place.



5.OBJECTIVES

- For easy and quick cleaning purpose in a smaller region.
- To remove the dust from road by the use of scrubber which is rotate by using wheel motion and stored in tank.
- To reduce the human effort and save the time of a user.
- To optimize the cost of machine. As well as environment sanitary

6. METHODOLOGY



7. CONCLUSION

Cleaning and disinfection are the basic process that protects human health, directly or indirectly. Therefore, we must maintain a good and safe environment around us. On the other hand, workers are hired to do these things. But it is impossible to work continuously for workers and this is a time-hindering process. Therefore, we need to think of secondary things that we can do to make things easier for ourselves.

Therefore, it is essential for this alternative method to overcome its disadvantages. This paper is to build a simple manually operated eco-friendly premises cleaner. That easily cleans compact spaces, and we make changes according to the street conditions and purpose of use. This eco-friendly premises cleaner for street cleaning reduces cost, personnel expenditure, and time.

REFERENCE

- [1] Samarth G. Gaikwad et al. – “Design and development of multifunctional floor scrubber and cleaner.” – [2019]. International Journal of Scientific & Technology Research. ISSN 2277-8616.
- [2] Mr. S. Rameshkumar et al. - “Design and fabrication of multipurpose floor cleaning machine.” – [2018]. International Journal of Advanced Science and Engineering Research.
- [3] Manya Jain et al - “Automatic Floor Cleaner”- [2017]. International Research Journal of Engineering and Technology (IRJET), e-ISSN: 2395 -0056, p-ISSN: 2395-0072
- [4] Prathmesh Joshi, AkshayMalviya&PriyaSoni – “Manually Driven Platform Cleaning Machine”– [2012]. Department of Industrial & Production Engineering, Jabalpur Engineering College, International Journal of Emerging Technology and Advanced Engineering.